

ABSTRACT

The invention offers an aluminum alloy plate with excellent press-formability and continuous resistance spot weldability, and a method of manufacturing such a plate. The aluminum alloy plate comprises, in % by mass, 0.3-1.0% of Mg, 0.3-1.2% of Si, 0.10-1.0% of Fe and 0.05-0.5% of Mn; where Fe + Mn \geq 0.2%; the remainder consisting of Al and unavoidable impurities; wherein an average value of recrystallized grain size is 25 μm or less; and at least 5000 particles/mm² of intermetallic compounds with a circle-equivalent diameter of 1-6 μm exist. It can further contain 0.5-1.0% of Cu, 0.1-0.4% of Zr, 0.05% or less of Ti or 0.05% or less of Ti together with 0.01% or less of B. The invention also offers a method of manufacturing an aluminum alloy plate comprising steps of pouring a melt consisting of the above composition into an opposing rotating belt caster that is forcibly cooled; casting the melt at a cooling rate of 40-90 $^{\circ}\text{C/sec}$ to form a 5-10 mm thick slab; drawing said slab from the side opposite the side where the melt was poured; rolling directly or after winding into a coil; and subjecting to a solution heat treatment.